DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-6, 8-14, 17-26, 28-34, 37-46, 49-56 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-6, 8-10, 17-26, 28-30, 37-43 and 49-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boreczky et al. (US PGPUB 2002/0075572), in view of Yeo (US Patent No. 6,711,741 B2), further in view of Matsui et al (US Patent No. 7,366,241).

With respect to Claim 1, the claimed "*In a client system, a method for enhancing navigation of a video, comprising: receiving the video as it is streamed from a server over a computer network*" is met by Boreczky et al. that teach the transmittal, **315**, of video from a server, **300**, to a video player, **320**, via a computer network, such as the Internet (*Fig. 3; paragraphs [0009], [0022], [0025]*).

The claimed "*receiving a first user request to display a first navigation video strip on a display device, wherein the first navigation strip comprises a first plurality of video frames from a video*" is met by Boreczky et al. that teach a user request, **325**, being

sent to a server, **300**, by way of a second connection, **305**, for the transmittal of video frames (keyframes) to be used for video indexing, that will be displayed on the display device, **330** (*Fig.3, 4; paragraphs [0026], [0028], [0030]*).

The claimed "*in response to the first user request, obtaining first instructions for displaying the first navigation video strip;*

obtaining the first plurality of video frames by requesting the specific video frames from the server by sending separate play request for the video frames in accordance with a video streaming protocol, wherein a normal play time of each play request begins at T_i and ends at $T_i + d$, wherein T_i is a timestamp of an i^{th} video frame, and wherein d does not exceed one frame duration; and *the first plurality of video frames, which are used to display corresponding thumbnails images for the first navigation video strip, are identified after streaming the video from the server has commenced* is met in part by Boreczky et al that teach device 320 receives look-ahead data 315, which is summarized and keyframes are selected and utilized by the client device 320 for making a display (Para. [0026] [0030] [0041]), *displaying the first navigation video strip on the display device in accordance with the first instructions* is met in part by Boreczky et al. that teach user request, **325**, being sent to a video player, **320**, whereby instructions containing the amount of the video to be indexed are sent to the server, **300**, and video key frames are sent to the video player, **320**, along with criteria (number of frames, amount of data, amount of time) to be displayed, **330**, via a second connection, **310** (*Fig.3 & 6; paragraphs [0026], [0030], [0041]*),*wherein displaying the first navigational video strip comprises retrieving the first plurality of video frames*

from the server and displaying corresponding thumbnail images is met by Boreczky et al. that teach the use of a low resolution server, 901, in supplying the snapshots that are to be used in a video index (Fig. 9 & paragraph [0043]).

The claimed "***obtaining the first plurality of video frames by requesting the specific video frames from the server by sending separate play request for the video frames in accordance with a video streaming protocol, wherein a normal play time of each play request begins at T_i and ends at T_i + d, wherein T_i is a timestamp of an i^{th} video frame, and wherein d does not exceed one frame duration***" is not specifically taught by the Boreczky et al. reference.

In the same field of endeavor, Yeo teaches a method of previewing/ playing back a source video frame by way of temporal snapshots, whereby both are stored on a server- the temporal snapshots being sent to a user and upon a user selecting one, the corresponding segments of the source video frames being sent to the user for playback reads on claimed "***obtaining the first plurality of video frames by requesting the specific video frames from the server by sending separate play request for the video frames in accordance with a video streaming protocol, wherein a normal play time of each play request begins at T_i (i.e. t= 10)and ends at T_i + d (i.e. 402(shot)), wherein T_i is a timestamp of an i^{th} video frame, and wherein d does not exceed one frame duration (i.e. temporal shot 406 (t=10) comprises 402(shot)).***" (*Figs.3 & 4; Abstract; col.1, lines 38-48; col.2, line 66 – col.3. lines 3,18-50; col.4, lines 35-40, 55-58, 61-64*). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have modified the Boreczky et al. reference with that of the

Yeo reference for the benefit of minimizing bandwidth use. A person of ordinary skill in the art would have been motivated to make such a modification to the Boreczky et al. reference for the additional benefit of providing a user with a reliable manner in which to quickly locate materials of interest in a given video.

The combination, Boreczky and Yeo, is silent with respect to "a video streaming protocol." In the similar field of endeavor, Matsui teaches "a video streaming protocol." (*col.25, lines 25-29; col.26, lines 21-26*). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have combined the use of 'video Streaming Protocol' as taught by the Matsui reference with the system of selecting indexed snapshots for streaming media of the Boreczky et al. reference, in view of the Yeo reference, in order to provide a suitable manner in which to transfer the indexed snapshots to a user. A person of ordinary skill in the art would have been motivated to make such a modification to the Boreczky et al. reference, in view of the Yeo reference, in order to allow a user to receive the video index & the video corresponding to the image in the index in an efficient manner.

With respect to Claim 2, the claimed "*wherein obtaining the first instructions comprises generating the first instructions*" is met by Boreczky et al. that teach a server, **600**, generating instructions as to the what specific video frames are to be supplied to the video player, **630** (*Fig. 1 & 6; paragraphs [0040], [0041]*).

With respect to Claim 3, the claimed " *whereby obtaining the first instructions comprises transmitting a first client request to the server to generate the first*

instructions" is met by Boreczky et al. that teach a channel, **605**, being used to send user requests to a server, 600 (*Fig. 1 & 6; paragraphs [0041]*).

With respect to Claim 4, the claimed "*wherein obtaining the first instructions further comprises receiving the first instructions from the server*" is met by Boreczky et al. that teach a server, **600**, transmitting forward-looking data via low resolution channels, $\mathbf{610_n}$, including instructions pertaining to the video index to be displayed (*Fig. 1 & 6, paragraphs [0038], [0041]*).

With respect to Claim 5, the claimed "*wherein obtaining the first instructions further comprises receiving a reference to the first instructions from the server*" is met by Boreczky et al. for the same reasons at those discussed above for Claim **4**.

With respect to claim 6, the claimed "the first instructions are formatted according to the Synchronized Multimedia Integration Language" is met by Matsui et al. (Matsui: Col.13 line 63- Col.14 lines 1-3 and lines 55-67).

With respect to Claim 8, the claimed "*wherein the first plurality of video frames are retrieved from the server in accordance with the Real Time Streaming Protocol (RTSP), and wherein requesting the specific video frames from the server comprises sending a separate RTSP PLAY request for each of the video frames*" is not explicitly taught by the Boreczky et al. reference. However, in the same field of endeavor, the Matsui reference teaches a data transmission system, in which a server provides a plurality of video streams to a receiving terminal using RTSP and a receiving terminal can send PLAY request messages to a server using RTSP (*col.25, lines 25-29; col.26, lines 21-26*).

It would have been obvious to one skilled in the art at the time the invention was made to have combined the use of 'Real Time Streaming Protocol' as taught by the Matsui reference with the system of selecting indexed snapshots for streaming media of the Boreczky et al. reference, in view of the Yeo reference, in order to provide a suitable manner in which to transfer the indexed snapshots to a user. A person of ordinary skill in the art would have been motivated to make such a modification to the Boreczky et al. reference, in view of the Yeo reference, in order to allow a user to receive the video index & the video corresponding to the image in the index in an efficient manner.

With respect to Claim 9, the claimed "*further comprising supporting user interaction with the first navigation video strip*" is met by Boreczky et al. that teach the video controls, **410**, for the navigation of a video, **400**, as well as for the video strip, **1440**, **1445**, **1450**, and **1460** (*Fig. 4, paragraph [0028]*).

With respect to Claim 10, the claimed "*wherein supporting the user interaction comprises: receiving a user selection of one of the first plurality of video frames; and in response to the user selection, playing the video on the display device beginning at the selected video frame*" is met by Boreczky et al. that teach a user being able to jump to a specific video position by selecting a video snapshot (*paragraphs [0011], [0042], [0047], [0049]*).

With respect to claim 52, Boreczky, Yeo and Matsui, the combination teaches everything claimed (see claim 1). The combination teaches claimed "receiving a user selection of an option concerning how the video is managed while the first navigation video strip is displayed, wherein the option is selected from the group consisting of

cropping the video and alpha-blending the video with the first navigation video strip" (i.e. video is streamed to user based on the image 628 selected and temporal snapshots 630-636 reflect said select image) (Yeo: Figures 6a-b; Co1.5 line 55 – Co1.6 lines 5). It would have been obvious to one skilled in the art at the time the invention was made to have modified the Boreczky et al. reference with that of the Yeo reference for the benefit of minimizing bandwidth use. A person of ordinary skill in the art would have been motivated to make such a modification to the Boreczky et al. reference for the additional benefit of providing a user with a reliable manner in which to quickly locate materials of interest in a given video.

With respect to Claim 17, the claimed "*wherein the option is selected from the group consisting of playing the video, pausing the video, and stopping the video*" is met by Boreczky et al. that teach playback controls, **410**, such as a pause/play button (*Fig.4, paragraph [0028]*).

Claim 18 is met as previously discussed with respect to Claims **1** & **2**. In addition, Boreczky et al. teaches the use of a video, **320**, and a server, **300**, which inherently has a processor and memory (*Fig. 3, 6, 8, and 9*).

Claim 19 is met as previously discussed with respect to Claim 4.
Claim 20 is met as previously discussed with respect to Claim 5.
Claim 53 is met as previously discussed with respect to Claim 52.
Claim 21 is met as previously discussed with respect to Claim 1.
Claim 22 is met as previously discussed with respect to Claim 2.
Claim 23 is met as previously discussed with respect to Claim 3.
Claim 24 is met as previously discussed with respect to Claim 4.
Claim 25 is met as previously discussed with respect to Claim 5.

Claim 26 is met as previously discussed with respect to Claim 6.

Claim 28 is met as previously discussed with respect to Claim 8.

Claim 29 is met as previously discussed with respect to Claim 9.

Claim 30 is met as previously discussed with respect to Claim 10.

Claim 54 is met as previously discussed with respect to Claim 52.

Claim 37 is met as previously discussed with respect to Claim 17.

Claim 38 is met as previously discussed with respect to Claims 1 & 2. In addition, Boreczky et al. teaches the use of a video, **320**, and a server, **300**, which inherently has a processor and memory (*Fig. 3, 6, 8, & 9).*

Claim 39 is met as previously discussed with respect to Claim 4.

Claim 40 is met as previously discussed with respect to Claim 5.

Claim 55 is met as previously discussed with respect to Claim 52.

Claim 41 is met as previously discussed with respect to Claims 1, 2. Additionally, with respect to the claimed "**a video that is being streamed from a server to a client over a computer network, wherein the video frames that are included in the navigation video strip are independent of a current playback position of the video**" is met by Yeo that teaches the use of video frames (temporal shots) included within the navigation video strip (602 to 610) that independently correspond to segments of the source video frames, such that when a user chooses an image the system plays back the selected image's corresponding segment of the source video frames (*Figs. 4, 6A, & 6B; col.2, line 66 to col.3, line 3; col.4, lines 61-64*).

Claim 42 is met as previously discussed with respect to Claim 4.

Claim 43 is met as previously discussed with respect to Claim 5.

Claim 56 is met as previously discussed with respect to Claim 52.

Claim 49 is met as previously discussed with respect to Claim 17.

Regarding claim 50, Boreczky et al, Yeo et al, Matsui et al, the combination teaches everything claimed (see claims 1 and 8). The combination teaches the first plurality of video frames are retrieved from the server in accordance with the Real Time Streaming Protocol (RTSP), and wherein requesting the specific video frames from the server comprises sending an RTSP PAUSE request following by an RTSP PLAY request (Boreczky: figure 4; paragraphs 0028 and Matsui: Col.25 lines 25-29, Col.26 lines 21-26).

Claim 51 is met as previously discussed with respect to claim 6.

4. Claims **11-14, 31-34, & 44-46** are rejected under 35 U.S.C. 103(a) as being unpatentable over Boreczky et al, in view of Yeo et al, in view of Matsui et al, further in view of Asami (US Pat 6,747,674).

With respect to Claim 11, the claimed "*receiving a second user request to modify the first time interval to a second time interval; in response to the second user request, obtaining second instructions for displaying a second navigation video strip, wherein the amount of time separating adjacent video frames in the second navigation video strip is substantially equal to the second time interval; and displaying the second navigation video strip in accordance with the second instructions*" is silent within, Boreczky et al, Yeo et al, Matsui et al, the combination. However, in the same field of endeavor, the Asami reference teaches a user being able to choose the time interval between still pictures of a video file, whereby a user inputs a specific time period and the system

creates picture thumbnails of the selected video at the selected time intervals (*Fig. 2-8; col.1, lines 59-62; col.3, lines 62-64; and col. 5, lines 32-36*).

It would have been obvious to one skilled in the art at the time the invention was made to have combined the ability to choose the time interval between still pictures of a video as taught by the Asami reference with the system of selecting indexed snapshots for streaming media of the combination (Boreczky et al.) in order to provide additional functionality to the user. A person of ordinary skill in the art would have been motivated to make such a modification to the combination in order to allow a user to choose the time period between the video frames in the video index, thereby allowing a more general or a more specific video summary.

With respect to Claim 12, the claimed "*wherein the method further comprises receiving user input about the number of video frames that are included in the first navigation video strip*" is met by Asami that teaches user being able to select the number of picture thumbnails related to a video file being searched (*Fig. 2-8; col.1, lines 59-62; col.3, lines 54-60 and col. 6, lines 34-36*).

With respect to Claim 13, the claimed "*wherein the method further comprises receiving user input about the number of video frames in the first navigation strip that are displayed on the display device*" is met by Asami that teaches the use of a CRT, **18**, in displaying a user selectable amount of picture thumbnails related to a video file (*Fig.1-8; col.3, lines 54-60 & col. 6, lines 34-36*).

With respect to Claim 14, the claimed "*wherein the method further comprises receiving user input about a location where the first navigation strip is displayed*" is met

by Asami et al. that teaches that the user can display a number of picture thumbnails or a scrolling index of them on a CRT, **18** (*col. 3, lines 54-64*).

Claim 31 is met as previously discussed with respect to Claim 11.

Claim 32 is met as previously discussed with respect to Claim 12.

Claim 33 is met as previously discussed with respect to Claim 13.

Claim 34 is met as previously discussed with respect to Claim 14.

Claim 44 is met as previously discussed with respect to Claim 12.

Claim 45 is met as previously discussed with respect to Claim 13.

Claim 46 is met as previously discussed with respect to Claim 14.

Conclusion

5. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KUNAL LANGHNOJA whose telephone number is 571-270-3583. The examiner can normally be reached on M-F 10:00 A.M.- 6:30 P.M. ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Beliveau can be reached on 571-272-7343. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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